

REMARKS

In the June 4, 2010 Office Action, claims 1-7 and 9-19 stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

Status of Claims and Amendments

In response to the June 4, 2010 Office Action, none of the claims are being amended by the current Amendment. Thus, claims 1-7 and 9-19 are pending, with claim 1 being the only independent claim. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

Rejections - 35 U.S.C. § 103

On pages 2-6 of the Office Action,

Claims 1-5, 9-11, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,462,817 (Hsu et al.) in view of Japanese Patent Publication No. 2003-59521 (Yoichi et al.); and

Claims 6, 7, 12, 13, 16, 17, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Hsu et al. patent in view of the Yoichi et al. publication and further in view of U.S. Patent Publication No. 2004/0062961 (Sato et al.).

In response, Applicants respectfully traverse the rejections as explained below.

Independent claim 1 specifies that a second flow path supplies supplied fluid to a heat recovery path and the heat recovery path recovers heat loss from a cell module. Contrary to the assertions of the Office Action, Hsu and/or Yoichi fail to disclose this point.

In the March 10, 2010 Amendment, Applicants argued that "Yoichi does not disclose heat exchange occurring between a fluid supplied to the fuel cell stack and the stack itself." In response to this argument in the June 4, 2010 Office Action, the Office Action states

- (A) “As Yoichi teaches the bypass line being used to modify and obtain a usable temperature of the oxidizing agent, this is considered by examiner to include recovery of heat loss.”

Prior to the opinion A, the June 4, 2010 Office Action states

- (B) “as the bypass line 18 of Yoichi utilized fluid that is from a heat exchanger, 9, examiner considers that line 18 indeed does supply fluid to the cell, through the heat exchanger” with regard to the bypass line 18 of Yoichi.

However, these assertions (A) and (B) are incorrect as below.

In particular, a recuperator 9 in Yoichi heats inputted oxidizing agent (10) and then exhausts using exhaust (8) gas of a reformer (6), and according to Figure 8 of Yoichi, the oxidizing agent (10) is inputted from the upper side of the recuperator 9 and will be exhausted from the lower side of the recuperator 9. In other words, the upper side of the recuperator 9 is an input side of the oxidizing agent 10 and the lower side is an exhaust side of the oxidizing agent 10. Since the bypass line 18 is connected to the input side of the recuperator 9, the oxidizing agent 10 supplied to the bypass line 18 will be the oxidizing agent 10 at the input side of the recuperator 9, namely the oxidizing agent 10 prior to the input to the recuperator 9. As such, the oxidizing agent 10 prior to the input to the recuperator 9 is supplied to the bypass line 18. However, the oxidizing agent 10 is exhausted from the recuperator 9. Thus, the oxidizing agent 10 from the recuperator 9 will not be supplied. Therefore, the assertion of the Office Action that “the bypass line 18 of Yoichi utilized fluid that is from a heat exchanger, 9” stated in assertion (B) of the Office Action is clearly erroneous.

Moreover, in Yoichi the bypass line 18 is provided to prevent all oxidizing agents 10 from being heated in the recuperator 9 by reducing an amount of the oxidizing agent 10 supplied to the recuperator 9. In other words, the bypass line 18 does not supply the oxidizing agent 10 to the cell through the recuperator 9 but rather supplies the oxidizing agent 10 to the cell without involving the recuperator 9. Therefore, the assertion of the Office Action that “line 18 indeed does supply fluid to the cell, through the heat exchanger 9” stated in assertion (B) of the Office Action is also clearly erroneous. Thus, the assertion of the

Office Action that “as the bypass line 18 of Yoichi utilized fluid that is from a heat exchanger, 9, examiner considers that line 18 indeed does supply fluid to the cell, through the heat exchanger” is not appropriate.

Furthermore, the bypass line 18 of Yoichi merely has a role as a detour in order not to supply the oxidizing agent 10 to the recuperator 9, and Yoichi fails to disclose changing temperature of the oxidizing agent 10 in the bypass line 18. Therefore, the assertion of the Office Action that “Yoichi teaches the *bypass* line being used to modify and obtain a usable temperature of the oxidizing agent” stated in assertion (A) of the Office Action is clearly erroneous, and the conclusion that “this is considered ... to include recovery of heat loss” based on the above assertion is also clearly erroneous.

In view of the foregoing comments, both assertions (A) and (B) stated in the Office Action are not correct and the bypass line 18 of Yoichi does not correspond to a heat recovery path recovering heat loss from the cell module as recited in the instant application independent claim 1. Accordingly, contrary to the assertions of the Office Action, Yoichi fails to disclose or suggest the heat recovery path recited in the instant claim 1. Hsu also fails to disclose the heat recovery path recited in the instant claim 1, as acknowledged in the Office Action (pages 2-3). Finally, the respective cited reference failing to disclose the claimed heat recovery path also does not disclose a second flow path that supplies supplied fluid to the heat recovery path recited in the instant claim 1. Thus, based on the above explanation, independent claim 1 is not obvious based on a hypothetical combination of Hsu and Yoichi.

Additionally, Sato et al. do not account for the deficiencies of Hsu and Yoichi with respect to independent claim 1. In fact, Sato et al. is only relied upon to allegedly disclose features set forth in dependent claims 6, 7, 12, 13, 16, 17, 18 and 19. Accordingly, withdrawal of the above rejections as applied to independent claim 1 is respectfully requested.

Under U.S. patent law, the mere fact that the prior art can be modified does *not* make the modification obvious, unless an *apparent reason* exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int’l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were

known in the prior art; it must be shown that those of ordinary skill in the art would have had some “apparent reason to combine the known elements in the fashion claimed.” Id. at 1741. The current record lacks any apparent reason, suggestion or expectation of success for combining the patents to create Applicants’ unique arrangement of independent claim 1.

Moreover, Applicants believe that dependent claims 2-7 and 9-19 are also allowable over the prior art of record in that they depend from independent claim 1, and therefore are allowable for the reasons stated above. Also, dependent claims 2-7 and 9-19 are further allowable because they include additional limitations, which in combination with the limitations of independent claim 1, are not disclosed or suggested by the prior art. Therefore, Applicants respectfully request that the rejections of these dependent claims also be withdrawn in view of the above comments.

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In view of the foregoing amendment and comments, Applicants respectfully assert that claims 1-7 and 9-19 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

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